ROLE OF LIVESTOCK IN DAIRY ECONOMY IN SELECTED DISTRICTS OF BALOCHISTAN PROVINCE

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Abstract

Cross-section research was used. Jaffarabad and Quetta were chosen for this research. Three hundred (300) livestock farmers were randomly selected. One hundred-fifty (150) livestock farmers from each district. Chi-Square test was run based on p<0.05 level. Finding reveals that (60%) of respondents fell into the 26 to 40 years' age categories. Vast majority (92%) of the respondents remained illiterate, the majority (77%) of the respondents were by gender male. Chi-Square technique was used in this research based on (p ≤0.05) level. Chi-Square values were highly significant in Jaffarabad district like (Pearson Chi-Square=12.645a), (Likelihood Ratio=15.467) and (Linear-by-Linear Association= 1.031) receptively. Chi-Square values was also significant in Quetta district like

(Pearson Chi-Square=33.621a), (Likelihood Ratio=35.924) and (Linear-by-Linear Association= 23.119) receptively as district-wise based on statistically significant at 5%. Based on the achieved outcome this study recommended that Balochistan government should develop the dairy product marketing mechanism at national and international level. Incentives and rewards should be given for front-line livestock workers at departmental level. Familiarize the latest technology in the livestock department with the provincial government.

Keywords: *Dairy economy, Livestock, Balochistan, Selected districts, Role*

1.1 Introduction

Globally, the livestock sector is grooming at an extraordinary rate. However, the livestock sector in this regard has huge potential regarding food security aspects, which produce the products/dairy products like eggs, red meat, poultry milk. In this regard the livestock sector is the major and modem food chain for food of the population. Therefore, the livestock sector is the imperative segment of the human world and also plays a vital role for human needs (Bos and Wit, 1996; and Cunningham, 1992).

Similar, around the world the livestock sector is dominant sector that produce the red meat, veal and beef, poultry and eggs, milk and milk product, wool and fur as well as produce the leather for small and big industries by the domesticated animals like cattle, cow, camel, sheep, chicken and goats. On the other hand, the livestock sector was also providing the precious items and nonfood products for human consumption like pharmaceuticals items, bone products, pelt, fur and fats. Effective animal husbandry practices have played widely imperative role and their dynamics varying from culture to cultures in many societies (Encyclopedia Britannica, n.d; USDA, 2013; and AHC, 2019).

However, the livestock farming practices and effective animal husbandry features have also mostly shifted or paradigm shifted from intensive animal farming around the world. Hence, the role of animal husbandry was not denied. Because, in this regard intensive farming in the livestock sector may increase the numerous profitable outputs in both qualitative and quantitative aspects. Which reflected the harmful effects over on animal wellbeing as well as also affects the public health and environment aspects at a greater

extent as a result the dairy products, red meat consumption pattern and beef marketing or yielding are severely affected (Anomaly, 2015; and USDA, 2017).

Livestock manure on the other hand, to retain the soil fertility in the vast grazing lands in any region of the world. In various places around the world animal manure is utilized as fuel either directly or indirectly. Still in least developed countries the livestock sector is used for machine power to pulverize the soil. However, livestock provided energy in the agriculture sector. Livestock sector as the major source of income of livestock farmers and rural families (De-Haan et al., 1997; Fafchamps et al., 1998; Swanepoel et al., 2010; Johannesen et al., 2011; Bell and Moore, 2012; and Kandulu et al., 2012).

Livestock sector has many social and economic preliminary importance regarding to reduce the rural poverty at a considerable rate for the both rural pastoral communities as well as nomadic societies (Swanepoel et al., 2010; Ali and Khan 2013; Bettencourt et al., 2013; and Khan et al., 2013).

Farm dairy products are directly connected with production economics as well as dairy production patterns. The key segments of dairy economy were given below:

- Uses of optimum level of dairy resources.
- To demarcate the means for altering the current uses of capitals at optimum level regarding dairy resources.
- Promote and diversify the dairy animal's well-being as an additional source.
- Empowered the livestock farmers by using the dairy resources economically.
- Effective breeding strategy developed so as to strengthen the dairy resources and dairy farming.
- Balanced nutrition should be promoted so as to empower the milk production capacity and dairy resources.
- Economic feeding patterns and efficient practices are important factors that must be regulated so as to diminish the cost of production.
- Uses the manpower and labor efficiently in order to enhance the milk production.

1.2 Livestock in Pakistan

Due to the agro-based industries, livestock is still the second largest component of Pakistan's economy. And also played an imperative role in Pakistan's economy. The livelihood option and major source of income of the majority or many farmer's families are directly or indirectly around the animal husbandry sector. Around thirty to thirty-five million people at the country level are involved in the livestock sector. On the other hand, the livestock industry constituted sixty point six percent in the overall farming sector as well as constituting the eleven point seven percent in Grass Domestic Product in the year of 2020. The livestock sector is the major source of ice cream, cheeses, milk, butter and dairy products. On the other hand, livestock was also a major source of fuel and soil fertility. It was worthwhile to mention that the 41% milk production was enhanced while 48% meat production was enhanced respectively during the year of 1990. Due to the major component of the country's economy and full socio-economic potential the livestock sector is still neglected and underdeveloped (Akhtar 1977; Encyclopedia of the Nations, 2011; and Amir, 2020).

1.3 Justification

Livestock sector at province level is facing various issues like insufficient breeding technology, lack of coordination between research and extension wing in livestock sector, unskilled labor, weak human resources and human management in livestock sector and lack of monitoring and evaluation in dairy sector as a result limited output in livestock sector. Keeping in view the above mentioned facts and figures this research was conducted so as to determine the role of the livestock sector within terms of the dairy economy in the selected districts of Balochistan province of Pakistan.

1.4 Objectives of the study

1. To assess the demographic profile of the respondents in the selected district of Balochistan.
2. To measure the role of livestock in the dairy economy in study areas.
3. To organize need-based training for livestock farmers in the study area.
4. To develop the need-based recommendations for policy implication.

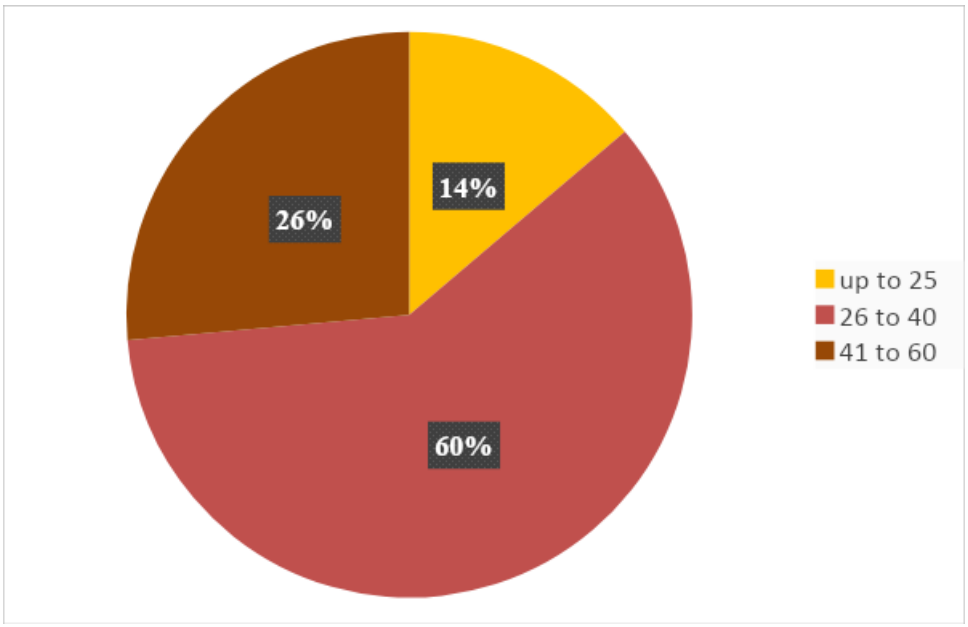
1.5 Materials and research methodology

Cross-section research in terms of qualitative research was used (Babbie, 2004). In this regard two districts of Balochistan like Jaffarabad and Quetta were carefully chosen by using the random sampling. However, both independent and dependent variables were measured by using the SPSS (Gay & Mills, 2006). Three hundred (300) livestock farmers were randomly selected. One hundred-fifty (150) livestock farmers were selected from each district like Jaffarabad and Quetta. For that purpose, a survey form was developed (Paulhus, 1984), by using the Likert scaling (Likert, 1932; and Jamieson, 2004). 0.79. to 0. 81 was the range of the consistency order as used by Cronbach's Alpha Program (Bowling, 1997; and Nunnaly, 1978). For determining the sample size, the Fitzgibbon and Morris, (1987) table was utilized. Raw data was analyzed by using SPSS (Burns and Grove, 1997). Chi-Square test within terms of crosstabs technique was run in this regard (Mohsin *et al.*, 2011). On the other hand, p-value was measured as significant based on $p<0.05$ level (Babbie & Mouton, 2004).

1.6 Demographic profile

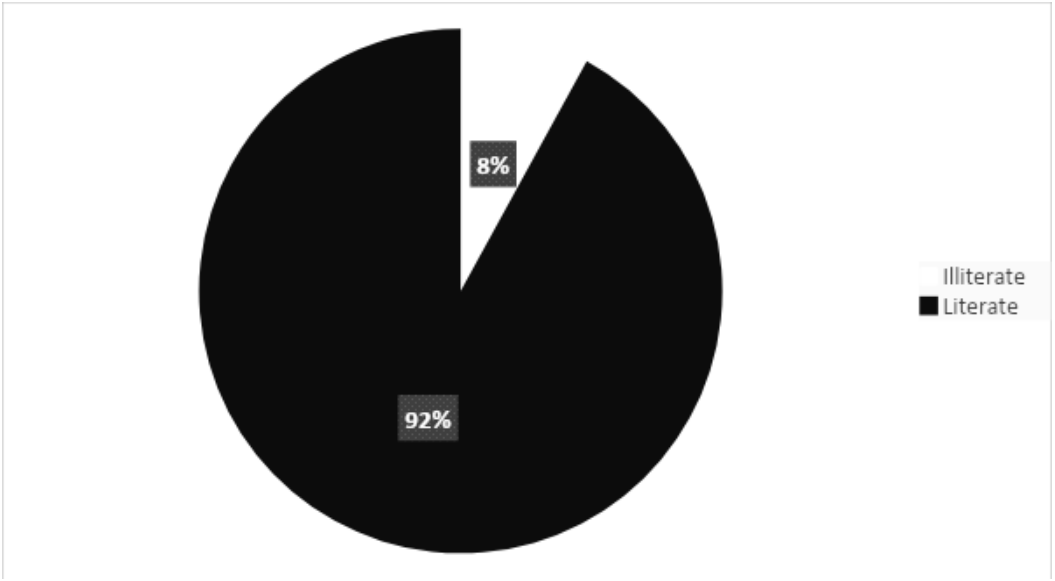
Demographic profile of the livestock farmers was measured by using the SPSS. Because demographic information reflected the positive impact regarding the decision-making process of livestock farmers.

Figure-1 Age of respondents



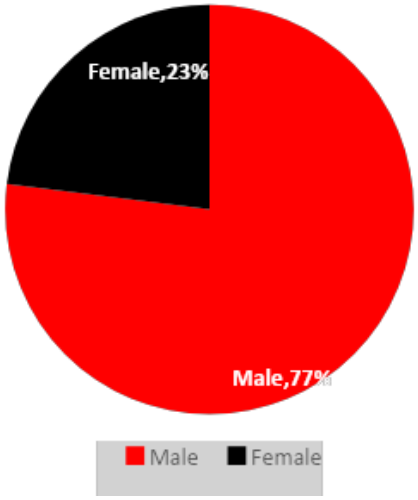
Age is the imperative item within terms of demographic profile as shown in figure-1. Majority (60%) of respondents fell into the 26 to 40 years' age categories. Followed 26-11% of the respondents were fallen into the 41 to 60 and up to 25 years of age categories respectively.

Figure-2 Educational status of respondents



Educational means to bring about a desirable modification in human knowledge, skill, beliefs and beliefs as shown in figure-2. Vast majority (92%) of the respondents remained illiterate while only 8% of the respondents were literate.

Figure-3 Gender of respondents



Gender is another imperative socio-economic profile. In this context, the raw data was gathered at field level as shown in figure-3. Vast majority (77%) of the respondents were by gender male and only remaining 23% by gender were female in both districts.

Table-1 Chi-square findings regarding dairy economy as district-wise

Dairy economy in livestock sector	**Value**	**df**	**Asymp: Sig. (2-sided)**
Jaffarabad district respondents			
Pearson Chi-Square	12.645a	4	**.013***
Likelihood Ratio	15.467	4	.004
Linear-by-Linear Association	1.031	1	.310
Phi	.205	-	.013
Cramer's V	.205	-	.013
Quetta district respondents			
Pearson Chi-Square	33.621a	4	**.000****
Likelihood Ratio	35.924	4	.000
Linear-by-Linear Association	23.119	1	.000
Phi	.335	-	.000
Cramer's V	.335	-	.000
No. of Valid Cases = three hindered "300" *Significant at 5% level			

In order to explore the perception of the respondents regarding the dairy economy in the selected district of Balochistan this research was carried out. In this context, raw data was gathered at field level and tabulated in SPSS. Chi-Square technique was used in this research based on ($p \leq 0.05$) level. Highly significant variations were found in the Jaffarabad respondent's views. Chi-Square value within terms of cross tabulation technique was used based on five alpha levels. Then the Phi or Cramer's value was estimated. Chi-Square values were highly significant in Jaffarabad district like (Pearson Chi-Square=12.645a), (Likelihood Ratio=15.467) and (Linear-by-Linear Association= 1.031) receptively. Chi-Square values was also significant in Quetta district like (Pearson Chi-Square=33.621a), (Likelihood Ratio=35.924) and (Linear-by-Linear Association= 23.119) receptively as district-wise based on statistically significant at 5%.

1.7 Conclusions and recommendations

Livestock sector is the backbone of Balochistan economy. Livestock sector provides food, shelter and fiber for the population. Besides that, the livestock sector is the major source of income for the rural farmers. Livelihood option of the rural people directly or indirectly related to the livestock sector. Based on achieved outcomes this research was developed as a recommendation for policymakers. Balochistan government should develop the dairy product marketing mechanism at national and international level. Incentives and rewards should be given for front-line livestock workers at departmental level. Familiarize the latest technology in the livestock department with the provincial government.

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